This bulletin also applies to the 6DT8. Except for its 6.3-volt/0.3-ampere heater, the 6DT8 is like the 12DT8.

6DT8

RCA

12DT8

HIGH-MU TWIN TRIODE

9-Pin Miniature Type

TENTATIVE DATA

RCA-12DT8 is a general-purpose high-mu twin triode of the 9-pin miniature type intended for use as an rf amplifier and as a combined oscillator-mixer in fm tuners. This tube is also useful in a wide variety of applications in radio and television receivers.

In the 12DT8, the two units are effectively isolated from each other by an internal shield having a separate base-pin terminal. As a result each unit will give stable performance when used in high-frequency applications. In addition, separate pin terminals for each cathode provide the equipment designer with greater flexibility of circuit connections.

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC)	12.6	volts
Current	0.15	amp

Direct Interelectrode Capacitances (Approx., with external shield):

	Unit No.1	*Unit No.2*	
Grid-Drive Operation○:			
Grid to plate	1.6	1.6	$\mu\mu$f
Grid to cathode, heater, and internal shield	2.7	2.7	$\mu\mu$f
Plate to cathode, heater, and internal shield	1.6	1.6	$\mu\mu$f
Heater to cathode	3.0	3.0	$\mu\mu$f
Cathode-Drive Operation:□			
Cathode to grid, heater, and internal shield	–	5.3	$\mu\mu$f
Plate to grid, heater, and internal shield	–	2.8	$\mu\mu$f

Mechanical:

Operating Position	Any
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip)	1-9/16" ± 3/32"
Maximum Diameter	7/8"
Bulb	T-6-1/2
Base	Small-Button Noval 9-Pin (JETEC No.E9-1)

AMPLIFIER - Class A_1

Values are for Each Unit

Maximum Ratings, *Design-Center Values:*

PLATE VOLTAGE	300	max.	volts
GRID VOLTAGE:			
Negative bias value	50	max.	volts
PLATE DISSIPATION	2.5	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200●	max.	volts

Characteristics:

Plate-Supply Voltage	100	250	volts
Cathode-Bias Resistor	270	200	ohms
Amplification Factor	60	60	
Plate Resistance (Approx.)	15000	10900	ohms
Transconductance	4000	5500	μmhos
Plate Current	3.7	10	ma
Grid Voltage (Approx.) for plate Current of 10 μa	−5	−12	volts

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias operation	0.25	max.	megohm
For cathode-bias operation	1	max.	megohm

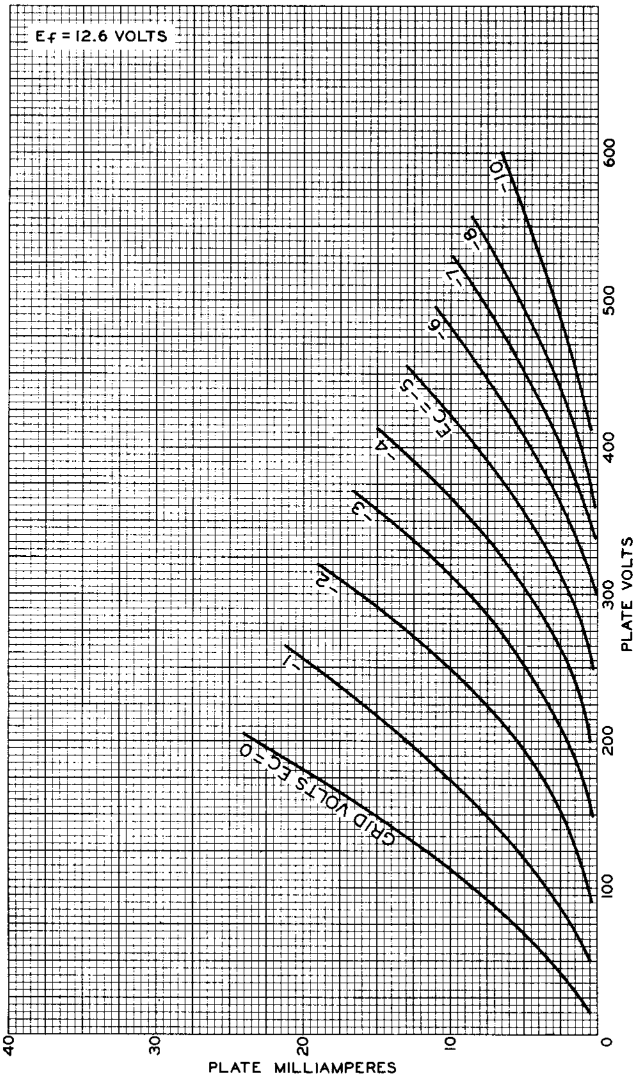
○ With external shield, JETEC No.315, connected to cathode of unit under test.

□ With external shield, JETEC No.315, connected to grid of unit under test.

● DC component must not exceed 100 volts.

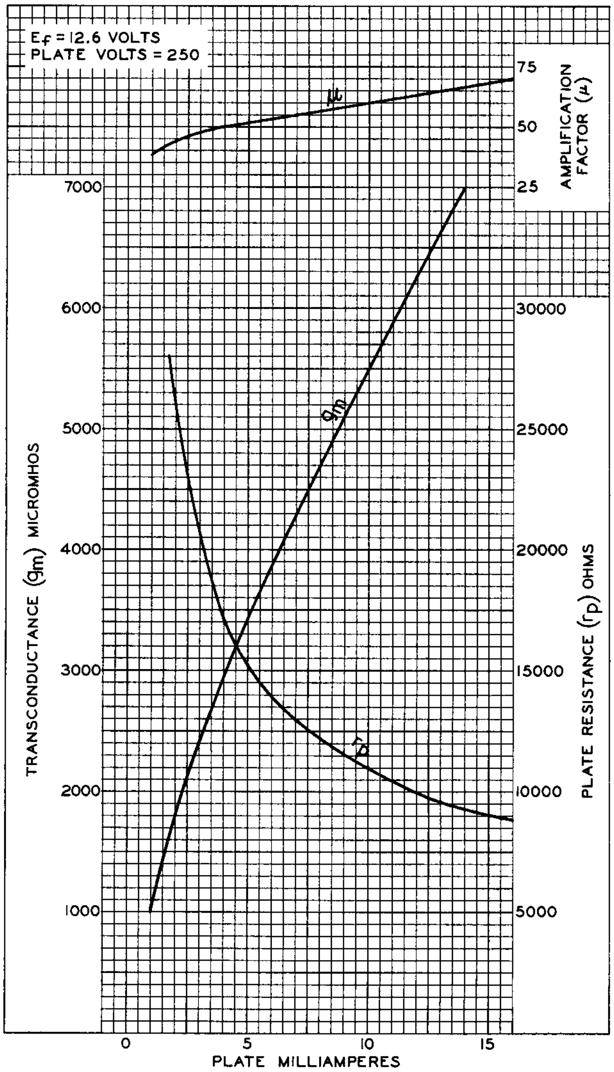
OPERATING CONSIDERATIONS

The *maximum ratings* in the tabulated data for the 12DT8 are working design-center maximums established according to the standard design-center system of rating electron tubes. Tubes so rated will give satisfactory performance in equipment designed so that these maximum ratings will not be exceeded when the equipment is operated from ac or dc power-line supplies whose normal voltage, including normal variations, falls within ± 10 per cent of line-center voltage value of 117 volts.



92CM-9397

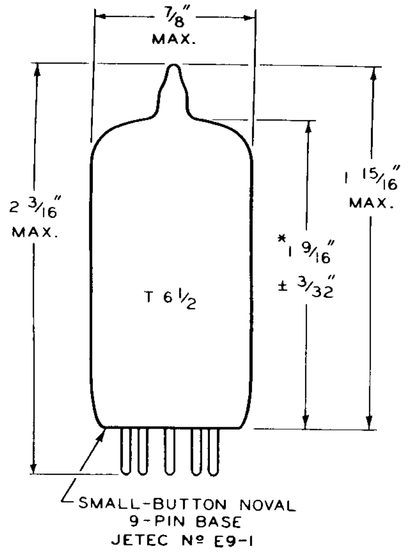
Fig. 1 - Average Plate Characteristics of Type 12DT8.



92CM-9396

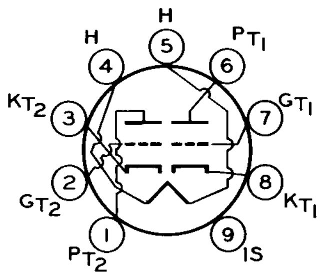
Fig. 2 - Average Characteristics of Type 12DT8.

DIMENSIONAL OUTLINE



* MEASURED FROM BASE SEAT TO BULB-TOP LINE AS DETERMINED BY RING GAUGE OF 7/16" I.D.

SOCKET CONNECTIONS
Bottom View



9DE

PIN 1: PLATE OF TRIODE UNIT No.2
PIN 2: GRID OF TRIODE UNIT No.2
PIN 3: CATHODE OF TRIODE UNIT No.2
PIN 4: HEATER
PIN 5: HEATER
PIN 6: PLATE OF TRIODE UNIT No.1
PIN 7: GRID OF TRIODE UNIT No.1
PIN 8: CATHODE OF TRIODE UNIT No.1
PIN 9: INTERNAL SHIELD